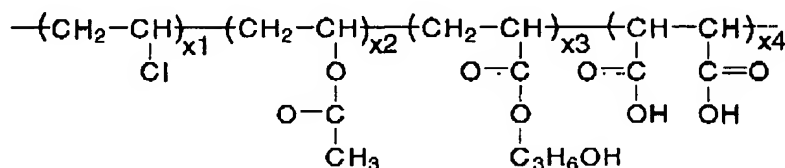Application No. 10/762,669

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

1.   **(Currently Amended)**   A photoconductive imaging member comprised of a photogenerating layer and a charge transport layer, and wherein the charge transport layer contains a polymeric solid acid, and wherein said polymeric acid is of the formula

$$-(CH_2-CH)_{x1}-(CH_2-CH)_{x2}-(CH_2-CH)_{x3}-(CH-CH)_{x4}$$

with substituents: Cl; O–C(=O)–CH_3 (O–C, O–C, CH_3); O–C, O (O–C, O, C_3H_6OH); O–C, OH; C=O, OH

wherein x_1, x_2, x_3 and x_4 represent the molar percentage of each component in the polymer, and wherein the sum of x_1, x_2, x_3 and x_4 is equal to 1.

2.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric solid acid is a copolymer present in an amount of from about 0.0001 to about 20 percent by weight.

3.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric acid is a copolymer present in an amount of from about 0.01 to about 20 percent by weight.

4.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric acid is present in an amount of from about 0.04 to about 10 percent by weight.

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     5.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** and wherein said polymeric acid is present in an amount of from about 0.1 to about 5 percent by weight.

     6.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid possesses a weight average molecular weight of from about 500 to about 100,000.

     7.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid possesses a weight average molecular weight of from about 1,000 to about 50,000.

     8.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer that possesses a number average molecular weight of from about 300 to about 90,000.
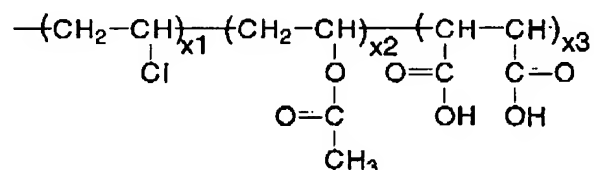
     9.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer that possesses a number average molecular weight of from about 800 to about 40,000.

     10.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid possesses a weight average molecular weight of from about 1,000 to about 50,000 and a number average molecular weight of form about 800 to about 40,000.

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11. Cancelled

12. (Original) A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is of the formula

$$-(CH_2-CH)_{x1}-(CH_2-CH)_{x2}-(CH-CH)_{x3}$$

with substituents: Cl on the $x1$ unit; O—C(=O)—CH$_3$ on the $x2$ unit; O=C—OH and C—O—OH on the $x3$ units.

wherein x_1, x_2, and x_3 represent the molar percentage of each component in the polymer, and the sum of x_1, x_2, and x_3 is equal to 1.

13. Cancelled

14. (Currently Amended) A photoconductive imaging member in accordance with **claim 1** wherein said polymeric acid is a copolymer of poly(ethylene-co-acrylic acid), poly(ethylene-co-methacrylic acid), poly(1,6-hexanedio/neopentyl glycol-alt-adipic acid), poly(3-hydroxybutyric acid), poly(3-hydroxybutyric-co-3-hydroxyvaleic acid), poly(4-hydroxy benzoic acid-co-ethylene terephthalate), ~~poly(methyl methacrylate-co-methacrylic acid),~~ poly(methyl vinyl ether-alt-maleic acid), poly(styrene-co-maleic acid) ester, poly(vinyl chloride-co-vinyl acetate-co-maleic acid) (VMCH®), or poly(vinyl chloride-co-vinyl acetate-co-2-hydroxypropyl acrylate-co-maleic acid).

15. (Original) A photoconductive imaging member in accordance with **claim 1** wherein the member further contains a hole blocking layer and an optional adhesive layer.

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16.   **(Original)** An imaging member in accordance with **claim 15** wherein said hole blocking layer is a tetrakis[methylene(3,5-di-tert-butyl-4-hydroxy hydrocinnamate)]methane.

17.   **(Original)** An imaging member in accordance with **claim 15** wherein the hole blocking layer is a hydrolyzed amino silane.

18.   **(Original)** An imaging member in accordance with **claim 15** wherein said hole blocking layer contains 4,4'-sulfonyldiphenol, 4,4'-isopropylidenediphenol, 4,4'-ethylidenebisphenol, bis(4-hydroxyphenyl)methane, 4,4'-(1,3-phenylenediisopropylidene) bisphenol, 4,4'-(1,4-phenylenediisopropylidene) bisphenol, 4,4'-cyclohexylidenebisphenol, 4,4'-(hexafluoroisopropylidene) diphenol, 1,3-benzenediol, or 1,4-benzenediol.

19.   **(Original)** An imaging member in accordance with **claim 15** wherein said hole blocking layer contains from about 1 to about 99 weight percent of a first phenolic resin and from about 99 to about 1 weight percent of a second phenolic resin, and wherein the total thereof is about 100 percent.

20.   **(Original)** An imaging member in accordance with **claim 15** wherein said hole blocking layer is of a thickness of about 0.01 to about 10 microns.

21.   **(Original)** A photoconductive imaging member in accordance with **claim 1** comprised in the following sequence of a supporting substrate, a hole blocking layer, an optional adhesive layer, said photogenerating layer, and said charge transport layer, and wherein the charge transport layer is a hole transport layer.

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22.   **(Original)**   A photoconductive imaging member in accordance with **claim 21** wherein the adhesive layer is present and is comprised of a polyester with an M_w of about 45,000 to about 75,000, and an M_n of from about 30,000 about 40,000.
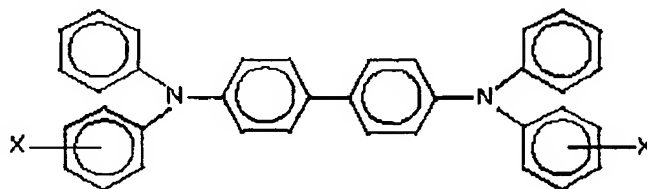
23.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** further containing a supporting substrate comprised of a conductive metal substrate of aluminum, aluminized polyethylene terephthalate or titanized polyethylene terephthalate.

24.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said photogenerator layer is of a thickness of from about 0.05 to about 10 microns, and wherein said transport layer is of a thickness of from about 20 to about 75 microns.

25.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** wherein said photogenerating layer is comprised of a photogenerating pigment or photogenerating pigments dispersed in a resinous binder, and wherein said pigment or pigments are present in an amount of from about 5 percent by weight to about 95 percent by weight, and optionally wherein the resinous binder is selected from the group comprised of vinyl chloride/vinyl acetate copolymers, polyesters, polyvinyl butyrals, polycarbonates, polystyrene-*b*-polyvinyl pyridine, and polyvinyl formals.

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26.   (Original)   A photoconductive imaging member in accordance with **claim 1** wherein the charge transport layer comprises hole transport aryl amines, and which aryl amines are of the formula

wherein X is selected from the group consisting of alkyl, alkoxy, and halogen.

27.   (Original) An imaging member in accordance with **claim 26** wherein the aryl amine is N,N'-diphenyl-N,N-bis(3-methyl phenyl)-1,1'-biphenyl-4,4'-diamine.

28.   (Original)   A photoconductive imaging member in accordance with **claim 1** wherein the photogenerating layer is comprised of metal phthalocyanines, or metal free phthalocyanines.
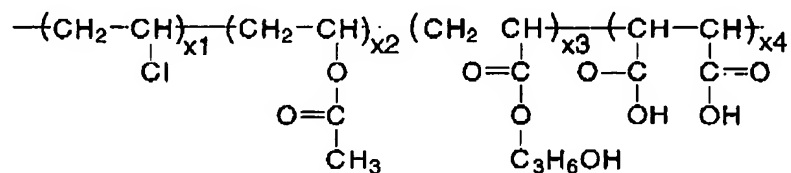
29.   (Original)   A photoconductive imaging member in accordance with **claim 1** wherein the photogenerating layer is comprised of titanyl phthalocyanines, perylenes, or hydroxygallium phthalocyanines.

30.   (Original)   A photoconductive imaging member in accordance with **claim 1** wherein the photogenerating layer is comprised of Type V hydroxygallium phthalocyanine.

31.   (Original)   A method which comprises generating an image on the imaging member of **claim 1**, developing the latent image, and transferring the developed image to a suitable substrate.

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32. **(Currently Amended)** A member comprised of a supporting substrate a photogenerating layer, and a charge transport layer, and wherein the charge transport layer contains a copolymeric solid acid, and wherein said copolymeric solid acid is of the formula

$$-(CH_2-CH)_{x1}-(CH_2-CH)_{x2}(CH_2\ CH)_{x3}-(CH-CH)_{x4}$$

(with pendant groups: Cl on first unit; O, O=C, CH_3 on second unit; O=C, O, C_3H_6OH on third unit; O-C, O, OH on fourth unit; C=O, OH on last unit)

wherein x_1, x_2, x_3 and x_4 represent the molar percentage of each component in the polymer, and wherein the sum of x_1, x_2, x_3 and x_4 is equal to 1.

33. **(Currently Amended)** A photoconductive imaging member comprised of a supporting substrate, an optional hole blocking layer, a photogenerating layer, and a charge transport layer, and wherein the charge transport layer contains a polymeric solid acid of poly(ethylene-*co*-acrylic acid), poly(ethylene-*co*-methacrylic acid), poly(1,6-hexanedio/neopentyl glycol-alt-adipic acid), poly(3-hydroxybutyric acid), poly(3-hydroxybutyric-co-3-hydroxyvaleic acid), poly(4-hydroxy benzoic acid-co-ethylene terephthalate), poly(methyl methacrylate-co-methacrylic acid), poly(methyl vinyl ether-alt-maleic acid), poly(styrene-co-maleic acid) ester, poly(vinyl chloride-co-vinyl acetate-co-maleic acid), or poly(vinyl chloride-co-vinyl acetate-co-2-hydroxypropyl acrylate-co-maleic acid).

34. **(Currently Amended)** An imaging member in accordance with ~~claim 11~~ claim 1 wherein x is about 0.81, x_2 is about 0.04, x_3 is about 0.15, and x_4 is about 0.0028.

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35.   **(Original)** An imaging member in accordance with **claim 33** wherein said blocking layer is present, and wherein said member further includes an adhesive layer.

36.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** further including a rigid substrate.

37.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** further including a supporting drum substrate.

38.   **(Original)**   A photoconductive imaging member in accordance with **claim 1** further including a supporting web substrate.

39.   **(Currently Amended)**   An imaging member in accordance with ~~claim 11~~ **claim 1** wherein x_1 is from about 0.1 to about 0.8, x_2 is from about 0.05 to about 0.3, x_3 is from about 0.1 to about 0.4, and y is from about 0.01 to about 0.4 providing that the sum of x_1, x_2, x_3, and x_4 is equal to 1.
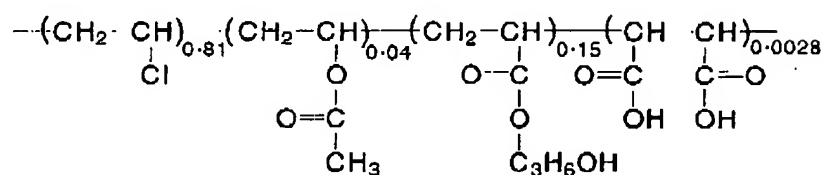
40.   **(Original)** An imaging member in accordance with **claim 12** wherein x_1, x_2, and x_3 are each from about 0.1 to about 0.9.

41.   **(Original)** An imaging member in accordance with **claim 12** wherein x_1, x_2, and x_3 are each from about 0.05 to about 0.7.
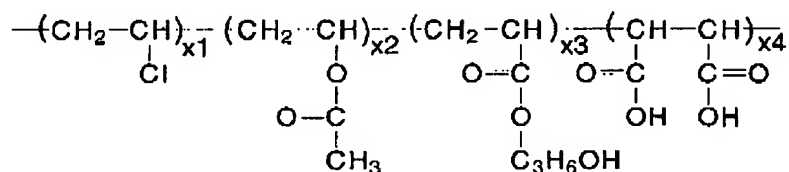
42.   **(Currently Amended)**   An imaging member in accordance with ~~claim 13~~ **claim 12** wherein x_1 and x_2 are each from about 0.1 to about 0.8.

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43. **(New)** An imaging member in accordance with **claim 1** wherein said polymeric acid is of the formula

$$-(CH_2-CH)_{0.81}(CH_2-CH)_{0.04}(CH_2-CH)_{0.15}(CH-CH)_{0.0028}$$

with pendant groups: Cl; $O=C-CH_3$ (from O); $O-C-C_3H_6OH$ (via O); $O=C-OH$; $C=O-OH$

44. **(New)** A photoconductive imaging member comprised in sequence of a supporting substrate, a photogenerating layer, and thereover a charge transport layer, and wherein the transport layer contains a polymeric solid acid of the formula

$$-(CH_2-CH)_{x1}(CH_2-CH)_{x2}(CH_2-CH)_{x3}(CH-CH)_{x4}$$

with pendant groups: Cl; $O-C-CH_3$ (from O); $O-C-C_3H_6OH$ (via O); $O-C-OH$; $C=O-OH$

wherein x_1, x_2, x_3 and x_4 represent the molar percentage of each component in the polymer, and wherein the sum of x_1, x_2, x_3 and x_4 is equal to about 1.

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